DEFENSE MAPPING AGENCY
BUILDING 56. U.S. NAVAL OBSERVATORY
WASHINGTON. D.C. 20305

U-5766/CMD

13 MAY 1983

Mr. Harry Fitzwater
Deputy Director for Administration
Central Intelligence Agency
Washington, D.C.   20505

Dear Mr. Fitzwater:

The Defense Mapping Agency (DMA) mission is to provide Mapping, Charting and Geodetic (MC&G) support and services to the Secretary of Defense, the Joint Chiefs of Staff, the Military Departments, other DoD components and the Intelligence community through the production and worldwide distribution of maps, charts, precise positioning data, and digital data for strategic and tactical military operations and weapons systems. DMA serves as the Program Manager and coordinator of all DoD MC&G resources and activities and, under law, carries out statutory responsibilities for providing nautical charts and marine navigation data for the use of all vessels of the United States and of navigators generally.

The DMA Office of Distribution Services (ODS) has an urgent need to upgrade the current computer configuration that supports the Defense Mapping Agency's Automated Distribution Management System (DADMS). The current computer configuration is inadequate to support the rapidly expanding internal processing and management information requirements, and also, the recently enlarged map and chart distribution mission in Europe. Specifications for the current computer system were developed in the 1978-1980 timeframe, based on known workload and data storage requirements at that time, with an estimate of future workload that has been overtaken by mission expansion.

Three primary problem areas affect the capability of Automatic Data Processing Equipment (ADPE) support to ODS operations. These are limited disk storage availability (the detailed problem definition is at Enclosure 1); limited central processor capacity at the ODS Headquarters (the detailed problem definition is at Enclosure 2); and the lack of computer support for the recently assumed additional responsibility by DMA for inventory management and distribution of maps and charts for U.S. Army Europe (the detailed problem definition is at Enclosure 3).

The primary goal of the Agency is the successful accomplishment of the DMA production and distribution of products to meet military and other user requirements, and to accomplish this goal in the required time frame at the lowest possible cost to the tax payer.

On file OSD release instructions apply.

I have been made aware of the redirection of the SAFE project and, thereby, the resulting availability of Government-owned Burroughs B-6900 computer systems. Two of these systems (augmented with some leased peripheral devices) could meet all current and projected workload for the ODS Headquarters through the end of this decade. The installation of this equipment would then free up the currently DMA-owned configuration for relocation to Europe. These actions would result in a substantial savings (cost avoidance) to the Government.

I, therefore, respectfully request two of your Government-owned Burroughs B-6900 computer systems, currently undergoing tests at Paoli, Pennsylvania, to be authorized for reutilization at the ODS Headquarters at 6101 MacArthur Boulevard, Washington, D.C. 20315. Equipment lists are at Enclosure 4. Should you require additional information, please contact my Headquarters staff manager for Data Automation, Mr. Douglas K. Hurd, at 653-1381. The Chief of Systems Support at ODS, Mr. John Balch, 227-3107, should be contacted for details and timing concerning the disassembly and shipping of the two B-6900 computer systems to the DMA Depot, Philadelphia, Pennsylvania, for temporary storage of approximately 90 days. Mr. Balch will also provide the necessary fund citation to cover the shipping and other related costs. It is understood that Burroughs is anxious to move these systems from their premises as soon as possible.

This confirms numerous telephone conversations during April 1983 between
STAT Mr. Hurd of my staff [_____] in your Agency's Office of Data
STAT Processing. [_____] very capable assistance in this matter is greatly
appreciated.

                              Sincerely,

                              ALBERT N. RHODES
                              Comptroller

4 Enclosures a/s

cc:
DMAODS (Mr. Balch)

1.A. PROBLEM DEFINITION--LIMITED DISK STORAGE SPACE AVAILABILITY.

a. System Overhead. Recent enhancements to the Burroughs system soft-
ware to provide faster system throughput and more flexibility, have increased
disk storage requirements for internal system management. Disk failures, while
infrequent, have been extremely costly in terms of missed deadlines and idle
resources. The failure of one disk module is sufficient to halt processing on
the entire system until repairs are completed. In addition to the actual
repair time, the disk unit must be reloaded prior to resumption of processing.
Thus, the failure of one module of disk can idle on-line processing for an
entire day. While provisions have been made to bypass either the Data Entry
Controller or Host in the event of a failure for priority requisition pro-
cessing, the remaining processing cannot be performed.

(1) Communications Software. Message and transaction queues, use
disk storage. This disk storage is assigned by the system software and must
always be available to guarantee data integrity.

(2) Virtual Storage. When each functional program executes, it is
assigned an area of disk storage to be used as virtual storage.

(3) Operator Display Terminal (ODT) Software. ODT maintains a log
of all console messages on disk storage. It also utilizes disk areas to hold
message queues.

(4) Command and Edit (CANDE) Software. Text editor files and work
areas are assigned disk storage by CANDE.

(5) Data Base. Large areas of disk storage are required both by the
Data Base and by the Data Base Management System that assigns the work areas,
virtual storage buffers and audit files.

b. Data Storage Expansion. Expansion of the data storage requirements
for Deployment/Allowance and War Reserve, and the addition of Notice to Mariners
products to the AID data base, have reduced available disk storage. Further
reduction of available disk storage will result from the implementation of soft-
ware to monitor billable issues and from enhancements to the Adjustments,
Requisitions and Deployment subsystems. Additional software for DMIS-P, ADP
Configuration Control and ADP Project and Software Management will also reduce
disk storage availability.

c. Temporary Storage Requirements. An increase in requests for product
issue history analysis reports to support product and customer requirement
studies and to provide input to product cost and price analysis has increased
the requirement for disk storage used for sort files, temporary work files and
print spool files. In addition to these product issue history analysis reports,
AID Annual Surveys, inventory analysis reports, and other report requirements
have expanded the need for temporary disk storage. The assignment of temporary
disk areas, in addition to making those areas unavailable while in use, creates
many small pockets of storage space which are unusable until they are merged
by a record edit.

d. System Availability. The lack of available disk capacity has had a direct impact on system availability. It has often caused the processing of specific jobs to halt because storage is not available for sortfiles, print spool files, message queues, audit trails or virtual memory. When this condition affects either data base management, communications or operating system software, the processing of the entire system workload must be suspended until non-essential files are off-loaded to tape to create the required disk space. If the off-loading of files is not sufficient, the system must be brought down to record edit the disk and consolidate the small fragments of available storage that have been created by the repeated allocation and deallocation of temporary storage areas. During the periods of interrupted processing, on-line subsystems processing, as well as batch mode software operations, must be suspended.

1.B.   PROBLEM DEFINITION--LACK OF DISK STORAGE BACKUP.

a. Excessive Downtime. Two disk drive models are used, the B9484(206) and the B9494(207). The 206 disk drive is replaceable; i.e., the disk storage unit is part of the drive. If there is a read failure on a 206 caused by a bad disk storage unit, replacement time is rapid. However, if the 207 has a problem, a minimum of four hours is required. If the disk unit has to be replaced or a major malfunction has occurred, technical staff from outside this geographic area must be brought to the site and repair time is estimated by Burroughs field engineering to average not less than one day and not more than three.

b. Impact of Downtime on Machine Operations. Current machine room operations require a three-shift, five-day week with frequent Saturday work requirements. In the event of downtime the only catch-up time available is weekend work. If downtime extends more than 48 hours, the system can only catch up by selective completion of obligations; i.e., skipping reports, canceling systems runs that, if not performed, would have minimum effect on the integrity of the system.

c. Impact of Downtime on Line Departments. The dollar cost in salary of all staff who use data terminals for production work and any overtime salary required should be used as the basic multiplier to calculate this cost.

d. Impact of Downtime on DMAODS. Based on its mission, extended periods of downtime are extremely critical to mission accomplishment.

2

2. PROBLEM DEFINITION--LACK OF PROCESSOR CAPACITY.

a. System Overhead. Recent enhancements to the Burroughs system software (MCP, NDL, DMSII, etc.), while providing for faster throughput, have increased system overhead requirements on memory and processor cycles. Further increases in overhead have resulted from additional on-line processing requirements (War Reserve, Naval Ship Deployment, etc.).

b. Expanded Reporting Requirements. Increased information requirements in areas such as product costing, product usage, and foreign military sales are being driven primarily by external information requests.

c. Expanded Functional Requirements. Functional requirements have been levied on the system. Examples are requirement to develop a billing system in support of contract sales to the maritime community; requirement to develop an interface between DADMS and HTC/GA production control; and assumption of additional MC&G functions in the European Theater.

d. Expanded Statistical Reporting. The ongoing internal controls review, the ODS management review, and OSD audit review are revealing a shortfall in the availability of statistical information to provide a basis for management decisions. ODS must develop an improved capability to provide statistical data and to analyze large amounts of data in order to maintain the DMA goals of highly responsive support to the Armed Services and efficient management of resources.

e. System Throughput. The increased workload has resulted in a reduction in system throughput and seriously impacts the ODS ability to meet mission requirements.

f. Central Processor Backup. The current system has no central processor backup. Consequently, whenever the control processor is down, automated distribution functions cease. The acquisition of Burroughs B6930 systems to be configured in a closely coupled mode will provide central processor backup and assure continuity of operations.

Enclosure 2

3. PROBLEM DEFINITION--DMA COMMITMENT TO PROVIDE ADP SUPPORT TO USAREUR DISTRIBUTION.

a. DMA has committed to providing ADP support to the MC&G distribution function of USAREUR through shared resources at Distribution Office Europe (DOE).

b. The current configuration being installed at DOE (Burroughs CP9400) does not have the storage capacity to handle the recently enlarged DOE data base of the USAREUR data base. Experience with these processors in the ODS Distribution Centers indicates that there is a strong probability that the processor will not support the added workload. In addition, the current capability to handle workload surges due to changes in political relations is non-existent.

c. Installation of Burroughs B6930 systems at ODS would make a DMA-owned B1955 available for transfer to DOE. This system would provide adequate processing and storage capability to support DMAODS operations in Europe. Estimated life cycle for this installation would extend through the end of the decade.

d. Personnel spaces (4-5) for operating a B1955 computer system would have to be supplied by DMA. Primary Systems and Programming support would have to be supplied by ODS Systems support Office. Programs and documentation are already in being for transfer to Europe.

e. Equipment maintenance would be contracted for with Burroughs, Europe.

Enclosure 3

BURROUGHS B-6900 EQUIPMENT LIST

The UTS-1 Processor Systems consisting of 11 items:

1	B6930 System with all standard features
1	A150 ICC Adapter w/I69-A I/F
1	B6930-2 IOBM Exchange 2 Proc
1	B9387-44 2x8 Disk Pack Control
1	B9494-43 1206 MB Disk Data Bank
1	B9247-14 1100 LPM Printer
1	B6034-90 Disk Pack DLP (ICC)
1	B6930-3 IOBM Exch. 3 Processor
1	1002 ICC Cabinet
1	H028 System Software PKG/B6900
1	ALGOL 68 Software

The SCM-1 Processor consisting of 13 items:

1	B6930 System with all standard features
1	A150 ICC Adapter
2	B6369-1 32KB IC Memory
2	B6369-10 RS232 EIA Char I/F
1	B9387-44 2x8 Disk Pack Controller
1	B9494-44 1608 MB Data Bank
1	B9499-22 2x8 GCR/PE Tape Controller
4	B9495-24 6250 BPI/320 200 IPS Tape Unit
1	B9246-20 2000 LPM Printer
1	B6304-90 Disk Pack DLP (ICC)
2	RS422/RS 232 Interfaces (Black Box)
1	B028 System Software PKG/B6900
1	Algol 68 Software

Enclosure 4

ODP STAFF SUMMARY SHEET

SUBJECT:

Request for two excess B6900 systems by Defense Mapping Agency

PURPOSE OF ACTION:

D/ODP's signature for routing to DDA

STAT ACTION

REFERENCES:

N/A

RESOURCE PACKAGE & COSTS (If applicable):

N/A

THIS PAPER IS FOR YOUR:

COMPONENT/ OFFICER	INFORMATION/ COMMENT	CONCURRENCE	APPROVAL/ SIGNATURE	INITIALS	DATE
C/P&PG	X				5/11/83
C/MS	X				5/16
EXO	X			C·D	5/17/83
DD/ODP	X				5/12/83
D/ODP			X		5·18·83

DISCUSSION:

See comments on routing sheet.

Also :
This letter was delivered directly to ODP. The DDA has not seen it. It may take a while to prepare a reply. Therefore, we are alerting the DDA.

G.D.

STAT

ADD TO OFFICIAL FILE   YES____ NO____

16 May 1983
DATE

4026 (8-79) OBSOLETE PREVIOUS EDITIONS

(36)

Explanatory Notes

Subject: Self-explanatory - include ODP number if applicable.

Purpose: What will action accomplish, e.g., "Reply to letter
        from OMB," "Obtain DDA approval to spend $100M,"
        "Comply with periodic reporting requirements," etc.

Action Officer: Name, organization, extension.

References: List of pertinent references. Copies should be
        attached in order listed.

Resource Package and Costs: Identify the Resource Package and
                            total costs for each fiscal year
                            if the action involves funds.

Routing: Who should see the action, whether for information,
        comment, concurrence, or signature/approval. The
        individual reviewing the action should initial and
        date where indicated. Place an "x" under the appro-
        priate column for each component. If concurrences
        are contained on record copy of action, simply refer
        to the action.

Discussion: Narrative discussion of action - what led up to
        the action, why is it necessary, what do you want
        done. The pertinent references should be explained
        insofar as they relate to this action. If the ac-
        tion itself contains all this information, simply
        refer to the action.

Signature of Action Officer: Sign and date form.

Classification: Mark at the top and bottom of page, as appro-
                priate.

STAT

ROUTING AND RECORD SHEET

SUBJECT: (Optional)
Defense Mapping Agency (DMA) Request for SAFE Project Excess Burroughs ADPE

FROM:		EXTENSION	NO.
			ODP-83-703
Director of Data Processing			DATE

STAT

STAT

TO: (Officer designation, room number, and building)	DATE		OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
	RECEIVED	FORWARDED		
1. EO/DDA 7D18 Hqs.				Harry:
2. A/DDA				Attached is a DMA request for two excess Burroughs B6900 computer systems. The letter was hand delivered to ODP for forwarding to DDA.
3. DDA				
4.				As you may recall, we started out with a total of ten excess B6900's and one B7800 (dual system) after the SAFE redirection. The B7800 will be picked up by NSA along with one B6900. DIA will re- tain one B6900; two B6900's will be placed in the Naval Systems Supply Command and two systems will go to DMA.
5.				
6.				
7.				
8.				The four remaining B6900's are unassigned. We have in- formed Burroughs that we have exhausted our best effort search within the IC and want to go to GSA for disposition. We are awaiting their reply.
9.				
10.				
11.				ODP will prepare a posi- tive reply to the attached DMA request for your signature.
12.				
13.				
14.				STAT
15.				